UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,406	10/02/2003	Brian Berenbach	2002P16409US01	8888

7590 11/01/2007

Elsa Keller
Siemens Corporation
Intellectual Property Department
170 Wood Avenue South
Iselin, NJ 08830

EXAMINER	
WOOD, WILLIAM H	
ART UNIT	**PAPER NUMBER**
2193	
MAIL DATE	**DELIVERY MODE**
11/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

mv

Office Action Summary	**Application No.** 10/677,406	**Applicant(s)** BERENBACH ET AL.	
	Examiner William H. Wood	**Art Unit** 2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *09 August 2004*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-19 are pending and have been examined.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 09 August 2004 considered by the examiner.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-11 and 15-19 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1-11 and 15-19 fail to establish a practical application by producing a useful, concrete and tangible result. A tree is an abstraction and not a real-world result.

Claim Objections

4. Improper duplication of claim number 14. Misnumbered second claim 14 has been renumbered claim 20.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Johan **Galle**, "HOORA: A Method for Hierarchical Object-Oriented Requirements Analysis Satisfying ESA's Needs".

Claim 1

Galle disclosed a method for extracting requirements of an architectural software model comprising the steps of:

providing a use case model as a directed graph of the architectural software model comprising nodes corresponding to use cases and relations between nodes *(page 39, right column, second and third paragraph; page 40, left column, second paragraph)*; and

creating, automatically, a tree comprising a root node corresponding to an abstract use case and at least one leaf node corresponding to one of an abstract use case and a concrete use case *(page 39, right column, second and third paragraph; page 40, left column, third and fourth paragraphs).*

Claim 2

Galle disclosed the method of claim 1, further comprising importing the tree directly into a requirements tool *(page 44, section "HOORA Tool Environment").*

Claim 3

Galle disclosed the method of claim 1, wherein creating the tree comprises:

creating one of a feature and a sub-feature of the tree upon determining an abstract use case of the use case model *(page 40, left column, third and fourth paragraphs)*; and

creating a requirement of the tree upon determining a concrete use case of the use case model *(page 41, section "HOORA Dynamic Modelling", figures on page 41).*

Claim 4

Galle disclosed the method of claim 1, wherein creating the tree comprises:

traversing the directed graph beginning with a root use case of the directed graph *(page 40, left column, third and fourth paragraphs)*; and

creating one of an included relationship, a derived relationship, and an extended relationship use case node corresponding a next use case of the directed graph *(page 41, section "HOORA Dynamic Modelling", figures on page 41 and 42).*

Claim 5

Galle disclosed the method of claim 4, wherein the root use case does not inherit or extend and is not included by another use case *(pages 41-42, section "HOORA Dynamic Modelling").*

Claim 6

Galle disclosed the method of claim 4, further comprising deleting relationships between nodes until each node has one and only one parent *(pages 41-42, section "HOORA Dynamic Modelling").*

Claim 7

Galle disclosed the method of claim 6, further comprising:

deleting the extended relationship upon determining that the next node has relationships to two predecessors, wherein a first relationship is derived, a second relationship is extended *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling")*;

deleting the included relationship upon determining that the next node has relationships to two predecessors, wherein the first relationship is derived, the second relationship is included *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling")*; and

deleting the extended relation upon determining that the next node has relationships to two predecessors, wherein the first relationship is included, the second relationship is extended *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling").*

Claim 8

Galle disclosed the method of claim 6, further comprising:

deleting a relationship to a node of a lower level upon determining that the next node has two predecessor relationships of the same type *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling")*;

deleting a relationship where a predecessor node is in a different package then a child node upon determining that the next node has two predecessor relationships of the same type *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling")*; and

deleting a relationship where the predecessor node is in a lower level package upon determining that the next node has two predecessor relationships of the same type *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling").*

Claim 9

Galle disclosed the method of claim 6, further comprising deleting a later encountered relationship upon determining the next node has two predecessor relationships with the same criteria *(pages 41-42, sections "HOORA Dynamic Modelling" and "HOORA Static Modelling").*

Claim 10

Galle disclosed the method of claim 1, further comprising detecting a cycle in the directed graph *(page 42, section "Trace ability")*.

Claim 11

Galle disclosed the method of claim 10, further comprising requesting an elimination of the cycle before proceeding with requirements extraction *(page 42, section "Trace ability")*.

Claim 12

Galle disclosed a method for semiautomated conversion of an analysis model to a design model comprising:

creating a mirror of the analysis model as the design model *(pages 43-44, sections "HOORA Method and OMT" and "HOORA Tool Environment")*;

reproducing a diagram of the analysis graph in the design model, wherein a design name adornment is added to the diagram in the design model *(page 44, left column, last bullet)*;

determining artifacts in the analysis model *(page 43, right column, last bulleted item)*;

recreating the artifacts in the design model using software conformant naming *(page 44, right column, first two bullets)*; and creating hyperlinks between the design model and the analysis model *(page 44, right column, first full paragraph).*

Claim 13

Galle disclosed the method of claim 12, further comprising performing an automated analysis model and design model verification comprising performing a cross-model check *(page 44, section "HOORA Tool Environment", sixth and seventh bullets).*

Claim 14

Galle disclosed the method of claim 12, further comprising performing an automated analysis model and design model verification comprising determining instances of a class in a sequence diagram, wherein an unused class violates the verification *(page 44, section "HOORA Tool Environment", sixth and seventh bullets).*

Claim 14 (renumber to 20)

Galle disclosed the method of claim 12, further comprising performing an automated analysis model and design model verification comprising determining instances of a class in a collaboration diagram, wherein an unused class violates the verification *(page 44, section "HOORA Tool Environment", sixth* *and seventh bullets).*

Claims 15-19

The limitations of claims 15-19 correspond to claims 1-5 and as such are rejected in a corresponding manner.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (571)-272-3736. The examiner can normally be reached 10:00am - 4:00pm Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)-272-3756. The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained form either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR systems, see http://pair-direct.uspto.gov. For questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

William H. Wood
Patent Examiner
AU 2193
April 2, 2007